



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/739,431	12/18/2003	Lyle V. Lehman	HES 2003-IP-009560U1	9268
29920	7590	03/21/2006	EXAMINER	
JOHN W. WUSTENBERG			COY, NICOLE A	
P.O. BOX 1431			ART UNIT	
DUNCAN, OK 73536			PAPER NUMBER	
			3672	
DATE MAILED: 03/21/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/739,431	<b>Applicant(s)</b> LEHMAN, LYLE V.	
	<b>Examiner</b> Nicole Coy	<b>Art Unit</b> 3672	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection. A new ground of rejection is made over newly found reference Zingg (USP 3,066,735).

### ***Claim Objections***

2. Claims 7 and 8 objected to because of the following informalities: Claims 7 and 8 depend from cancelled claim 6. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. Claims 31 and 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not disclose pumping a ball into the tool or engaging a seat in the sleeve with the ball as recited in claim 31.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 3672

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 9-13, 18-20, and 29-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Zingg (USP 3,066,735).

With respect to claim 1, Zingg discloses a hydrojetting tool for use in a wellbore, comprising: at least three jetting modules (52, 54, 57, 58); each jetting module having jetting nozzles therein adapted for jetting fluid into a formation adjacent the wellbore (see figure 1); and a sleeve disposed in all but one of the jetting modules (36, 38; see column 1 lines 45-55); wherein each sleeve is moveable from a first position covering the jetting nozzles in the corresponding jetting module to a second position covering the jetting nozzles in an adjacent jetting module, so that the jetting modules may be operated sequentially (see column 3 line 40 to column 4 line 3).

With respect to claim 9, Zingg discloses that the jetting module without a sleeve (54) therein is a lowermost jetting module (see figure 1).

With respect to claim 10, Zingg discloses that the jetting nozzles are replaceable (see column 4 lines 63-66).

With respect to claim 11, Zingg discloses a hydrojetting tool for use in a wellbore, comprising: a plurality of jetting modules (52, 54, 57, 58), wherein each jetting module has jetting nozzles therein adapted for jetting fluid into a formation adjacent the wellbore (see column 1 lines 9-10); and a sleeve slidably disposed in all but one of the jetting modules (36, 38; see column 1 lines 45-55), wherein each sleeve has a first position covering the jetting nozzles in the corresponding jetting module and is moveable to a second position uncovering the jetting nozzles in the corresponding jetting module and

Art Unit: 3672

covering the jetting nozzles in an adjacent jetting module (36, 38; see column 1 lines 45-55).

With respect to claim 12, Zingg discloses that the sleeves may be moved sequentially such that the jetting modules may be operated sequentially (see column 3 line 40 to column 4 line 3).

With respect to claim 13, Zingg discloses that the sleeves are moved downwardly from the first to second positions thereof (see column 1 lines 45-55).

With respect to claim 18, Zingg discloses that the jetting module not having a sleeve therein is a lowermost jetting module (see column 3 line 40 to column 4 line 3).

With respect to claim 19, Zingg discloses that the lowermost jetting module has a shoulder (56) therein for limiting movement of the sleeve in the adjacent jetting module (see figure 6).

With respect to claim 20, Zingg discloses that the jetting nozzles are replaceable (see column 4 lines 63-66).

With respect to claim 29, Zingg discloses a method of treating a formation located adjacent a wellbore, comprising the steps of: providing a tool comprising first and second jetting modules (52, 54), wherein each jetting module has a least one jetting nozzle therein adapted for jetting fluid into the formation (see column 1 lines 9-10); positioning the tool adjacent the formation (see column 3 lines 10-20); pumping fluid to the tool, wherein the fluid is jetted out the at least one jetting nozzle in the first jetting module but not out the at least one jetting nozzle in the second jetting module (see column 3 lines 40-66); and pumping a plug (51) to the tool, wherein fluid stops being

jetting out the at least one jetting nozzle in the first jetting module and starts being jetted out the at least one jetting nozzle in the second jetting module (see column 3 lines 40-50).

With respect to claim 30, Zingg discloses a method of treating a subsurface formation comprising: positioning a tool with a plurality of jetting modules (52, 54, 57, 58) adjacent the formation wherein each jetting module has jetting nozzles (see figure 1); jetting a treatment fluid into the formation through the jetting nozzles in a first of the jetting modules (see column 3 lines 10-20); and shifting a sleeve in the tool to cover the jetting nozzles in the first of the jetting modules to uncover the nozzles in the adjacent second of the jetting modules wherein the sleeve is originally positioned to cover the nozzles in the second of the jetting modules (see column 3 lines 40-66).

With respect to claim 31, Zingg discloses pumping a ball into the tool (51); engaging a seat (50) in the sleeve (38) with the ball (51); and increasing pressure to move the sleeve and cover the jetting nozzles in the first of the jetting modules and to uncover the jetting nozzles in the adjacent second of the jetting modules (see column 3 lines 40-66).

With respect to claim 32, Zingg discloses jetting a treating fluid into the formation through the jetting nozzles in the second of the jetting modules (see column 3 lines 58-60).

With respect to claim 33, Zingg discloses the tool with the plurality of jetting modules comprising one less sleeve than jetting modules (see column 1 lines 45-55), the method further comprising jetting through the nozzles in at least a portion of the

plurality of jetting modules sequentially beginning with the nozzles in the first jetting module and moving sleeves in the tool to uncover the jetting nozzles in the jetting module adjacent the jetting module with the immediately previously used jetting nozzles and to cover the nozzles in the module with the immediately previously used jetting nozzles, until the jetting nozzles in a desired number of modules have been utilized (see column 3 lines 40-66).

With respect to claim 34, Zingg discloses using the tool until the jetting nozzles in all of the plurality of jetting modules have been used (see column 3 line 67 to column 4 line 3).

With respect to claim 35, Zingg discloses that the treating fluid is a fracturing fluid containing a proppant (see column 4 lines 13-19).

With respect to claim 36, Zingg discloses that the fluid comprises a fracturing fluid containing proppant (see column 4 lines 13-19).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7, 8, 14-17, and 21-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zingg.

With respect to claims 7 and 14, Zingg discloses a plug or ball 51 and a ball 68. Based on the fact that 51 can be a ball or a plug, Zingg teaches that balls and plugs are interchangeable and thus it would have been obvious to one having ordinary skill in the art to use a plug in the place of ball 68. Thus, Zingg teaches a plurality of plugs (51, 58), wherein each plug is adapted for engagement with a corresponding one of the sleeves for moving the sleeve from its first position to its second position (see column 3 line 40 to column 4 line 3).

With respect to claim 8, Zingg teaches that the plugs (51, 68) may be further pumped through the corresponding sleeve after moving the sleeve from the first position to the second position (see column 3 lines 40-50).

With respect to claim 15, Zingg teaches that each sleeve comprises: an upper sleeve portion (38, 36) which covers the jetting nozzles in the corresponding jetting module when the sleeve is in the first position (see figure 1); a lower sleeve portion (38, 36) which covers the jetting nozzles in the adjacent jetting module when the sleeve is in the second position (see column 1 lines 45-55); and an inwardly extending mandrel disposed between the upper and lower sleeve portions and adapted for engagement by the corresponding plug (50, 48).

With respect to claim 16, Zingg teaches that the mandrels define holes therein, the holes being progressively larger from a lowermost sleeve to an uppermost sleeve (see column 4 lines 5-12).



With respect to claim 17, Zingg teaches that the plugs (51, 68) may be further pumped through the tool after moving the corresponding sleeve from its first position to its second position (see column 3 lines 40-50).

With respect to claim 21, Zingg discloses a hydrojetting tool for use in a wellbore, comprising: a plurality of jetting modules (52, 54, 57, 58), wherein each jetting module has jetting nozzles therein adapted for jetting fluid into a formation adjacent the wellbore (see column 1 lines 9-10); a sleeve slidably disposed in all but one of the jetting modules (36, 38), wherein each sleeve has a first position covering the jetting nozzles in the corresponding jetting module and is moveable to a second position uncovering the jetting nozzles in the corresponding jetting module and covering the jetting nozzles in an adjacent jetting module (see column 1 lines 45-55); and a plurality of plugs (51, 68), wherein each plug is adapted for being pumped into engagement with a corresponding one of the sleeves and thereby moving the corresponding sleeve from its first position to its second position (see rejection of claim 7 above).

With respect to claim 22, Zingg teaches that the sleeves may be engaged and moved sequentially such that the jetting modules may be operated sequentially (see column 3 line 40 to column 4 line 3).

With respect to claim 23, Zingg teaches that the sleeves are moved downwardly from the first to second positions thereof (see column 1 lines 45-55).

With respect to claim 24, Zingg teaches that each sleeve comprises: an upper sleeve portion (38, 36) which covers the jetting nozzles in the corresponding jetting module when the sleeve is in the first position (see column 3 line 40 to column 4 line 3);

Art Unit: 3672

a lower sleeve portion (38, 36) which covers the jetting nozzles in the adjacent jetting module when the sleeve is in the second position (see column 3 line 40 to column 4 line 3); and an inwardly extending mandrel (50, 48) disposed between the upper and lower sleeve portions and adapted for engagement by the corresponding plug (51, 68).

With respect to claim 25, Zingg teaches that the mandrels (50, 48) define holes therethrough, the holes being progressively larger from a lowermost sleeve to an uppermost sleeve (see column 4 lines 5-12).

With respect to claim 26, Zingg teaches that the plugs (51, 68) may be further pumped through the tool after moving the corresponding sleeve from the first position to the second position (see column 3 lines 40-50).

With respect to claim 27, Zingg teaches that the jetting module not having a sleeve (54) therein is a lowermost jetting module (see figure 1).

With respect to claim 28, Zingg teaches that the jetting nozzles are replaceable (see column 4 lines 63-66).

### ***Conclusion***

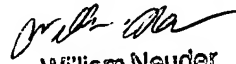
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole Coy whose telephone number is 571-272-5405. The examiner can normally be reached on M-F 8:00-5:30, 1st F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3672

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

nac

  
William Neuder  
Primary Examiner